IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 6, 10, 18, and 21, ADD new claim 22, and CANCEL claim 19, in accordance with the following:

1. (CURRENTLY AMENDED) A coma aberration correcting apparatus of an optical pickup including an optical pickup main body having a photo diode, and an actuator mounted on an objective lens focusing a beam emitted from the photo diode onto a recording medium, the coma aberration correcting apparatus comprising:

a main supporting unit detachably supporting the optical pickup main body;

a holding unit holding and releasing the actuator on the optical pickup main body supported by the main supporting unit;

an optical system magnifying and photographing the beam emitted from the photo diode through the objective lens of the actuator held by the holding unit;

a driving part adjusting a position of the actuator relative to the optical pickup main body; and

a controller controlling the driving part to correct the coma aberration of the objective lens by calculating a coma aberration value based on a centroid difference between beam images having minimum coma aberration and a beam image having some coma aberration, where the beam images having the minimum coma aberration and the beam image having some coma aberration are captured by the optical system, and determining whether the actuator passes inspection by comparing the calculated coma aberration value with a predetermined reference value.

2. (ORIGINAL) The coma aberration correcting apparatus according to claim 1, wherein the driving part comprises:

an X-axis stage and a Y-axis stage moving the actuator horizontally,

a Z-axis stage moving the actuator vertically, and

an R-axis stage and a T-axis stage adjusting an inclination of the actuator.

3. (ORIGINAL) The coma aberration correcting apparatus according to claim 1, wherein the holding unit comprises:

a holding part holding the actuator by a magnetic force, and

a cylinder unit adjacent to the holding part and controlling the magnetic force of the holding part.

4. (ORIGINAL) The coma aberration correcting apparatus according to claim 3, wherein the optical system comprises:

a low magnification camera, and

a high magnification camera having a magnification higher than the low magnification camera, wherein the low and high magnification cameras magnify and photograph the beam emitted from the photo diode through the objective lens of the actuator.

5. (ORIGINAL) The coma aberration correcting apparatus according to claim 4, wherein the controller

controls the X-axis and Y-axis stages until the low magnification camera captures the beam,

controls the X-axis and Y-axis stages to centrally photograph the beam using the low magnification camera,

controls the Z-axis stage to photograph the beam using a low magnification of the low magnification camera,

controls the X-axis and Y-axis stages to centrally photograph the beam using the high magnification camera,

controls the Z-axis stage to photograph the beam using a maximum brightness of the high magnification camera, and

controls the R-axis and T-axis stages to photograph the beam using a minimum coma aberration of the high magnification camera.

6. (CURRENTLY AMENDED) The coma aberration correcting apparatus according to claim 5, wherein ~~the controller~~

~~calculates a coma aberration value based on a centroid difference between beam images having the minimum coma aberration and a beam image having some coma aberration,~~

~~where~~ the beam images having the minimum coma aberration and the beam image having some coma aberration are captured by the high magnification camera~~, and~~

~~determines whether the actuator passes inspection by comparing the calculated coma aberration value with a predetermined reference value~~.

7. (ORIGINAL) The coma aberration correcting apparatus according to claim 2, wherein the holding unit comprises:

a holding part holding the actuator by a magnetic force, and

a cylinder unit adjacent to the holding part and controlling the magnetic force of the holding part.

8. (ORIGINAL) The coma aberration correcting apparatus according to claim 7, wherein the optical system comprises:

a low magnification camera, and

a high magnification camera, wherein the low and high magnification cameras magnify and photograph the beam emitted from the photo diode through the objective lens of the actuator.

9. (ORIGINAL) The coma aberration correcting apparatus according to claim 8, wherein the controller

controls the X-axis and Y-axis stages until the low magnification camera captures the beam,

controls the X-axis and Y-axis stages to centrally photograph the beam using the low magnification camera,

controls the Z-axis stage to photograph the beam using a low magnification of the low magnification camera,

controls the X-axis and Y-axis stages to centrally photograph the beam using the high magnification camera,

controls the Z-axis stage to photograph the beam using a maximum brightness of the high magnification camera, and

controls the R-axis and T-axis stages to photograph the beam using a minimum coma aberration of the high magnification camera.

10. (CURRENTLY AMENDED) The coma aberration correcting apparatus according to claim 9, wherein ~~the controller~~

~~calculates a coma aberration value based on a centroid difference between beam images having the minimum coma aberration and a beam image having some coma aberration, where~~ the beam images having the minimum coma aberration and the beam image having some coma aberration are captured by the high magnification camera~~, and~~

~~determines whether the actuator passes inspection by comparing the calculated coma aberration value with a predetermined reference value~~.

11. (original) The coma aberration correcting apparatus according to claim 1, wherein the driving part comprises:

driving motors to adjust the position of the actuator to the optical pickup main body.

12. (ORIGINAL) The coma aberration correcting apparatus according to claim 1, further comprising:

a pair of projections operably connected to the actuator when the optical pickup main body is supported by the main supporting unit, and

a through hole through which the holding unit passes to hold the actuator.

13. (ORIGINAL) The coma aberration correcting apparatus according to claim 1, wherein the driving part is provided under the holding unit and is connected to the controller using cables and controlled to adjust the position of the actuator and a position of the objective lens mounted on the actuator.

14. (ORIGINAL) The coma aberration correcting apparatus according to claim 2, wherein the controller is coupled to the X-axis, Y-axis, Z-axis, and R-axis stages using cables to control the driving part to correct the coma aberration of the objective lens.

15. (ORIGINAL) The coma aberration correcting apparatus according to claim 14, further comprising:

a low magnification camera photographing the beam, wherein the controller processes the beam photographed by the low magnification camera and controls the X-axis and Y-axis

stages until the beam emitted from the photo diode through the objective lens of the actuator is captured by the low magnification camera.

16. (ORIGINAL) The coma aberration correcting apparatus according to claim 15, wherein the controller controls the X-axis, Y-axis, and Z-axis stages to adjust a focus and a position of the beam photographed by the low magnification camera.

17. (ORIGINAL) The coma aberration correcting apparatus according to claim 16, further comprising:

a high magnification camera photographing the beam, wherein the controller processes the beam photographed by the high magnification camera, controls the X-axis, Y-axis, and Z-axis stages to finely adjust a focus and a position of the beam from the photo diode, and controls the R-axis and T-axis stages to correct the coma aberration based on the beam photographed by the high magnification camera.

18. (CURRENTLY AMENDED) The coma aberration correcting apparatus according to claim 17, wherein the ~~controller calculates a coma aberration value on a basis of a centroid difference between~~ a beam image having ~~approximately~~ the minimum zero coma aberration and a beam image having some coma aberration~~, which~~ are captured by the high magnification camera.

19. (CANCELED) The coma aberration correcting apparatus according to claim 1, wherein the coma aberration correcting apparatus automatically adjusts the position of the actuator mounted on the objective lens relative to the optical pickup main body to correct the coma aberration of the optical pickup.

20. (ORIGINAL) The coma aberration correcting apparatus according to claim 1, wherein the controller comprises a computer having a control program to control the controller to correct the coma aberration.

21. (CURRENTLY AMENDED) A coma aberration correcting apparatus of an optical pickup including an optical pickup main body having a photo diode, and an actuator mounted on an objective lens focusing a beam emitted from the photo diode onto a recording

medium, the coma aberration correcting apparatus comprising:

a driving part adjusting in an automated manner and without human intervention a position of the actuator relative to the optical pickup main body; and

a controller controlling the driving part to correct the coma aberration of the objective lens by calculating a coma aberration value based on a centroid difference between beam images having minimum coma aberration and a beam image having some coma aberration, where the beam images having the minimum coma aberration and the beam image having some coma aberration are captured by an optical system, and determining whether the actuator passes inspection by comparing the calculated coma aberration value with a predetermined reference value.

22. (NEW) A coma aberration correcting apparatus of an optical pickup including an optical pickup main body having a photo diode, and an actuator mounted on an objective lens focusing a beam emitted from the photo diode onto a recording medium, the coma aberration correcting apparatus comprising:

a main supporting unit detachably supporting the optical pickup main body;

a holding unit holding and releasing the actuator on the optical pickup main body supported by the main supporting unit, the holding unit comprising a holding part holding the actuator by a magnetic force, and a cylinder unit adjacent to the holding part and controlling the magnetic force of the holding part;

an optical system magnifying and photographing the beam emitted from the photo diode through the objective lens of the actuator held by the holding unit, the optical system comprising a low magnification camera, and a high magnification camera having a magnification higher than the low magnification camera, wherein the low and high magnification cameras magnify and photograph the beam emitted from the photo diode through the objective lens of the actuator;

a driving part adjusting a position of the actuator relative to the optical pickup main body; and

a controller controlling the driving part to correct the coma aberration of the objective lens, by calculating a coma aberration value based on a centroid difference between beam images having the minimum coma aberration and a beam image having some coma aberration, where the beam images having the minimum coma aberration and the beam image having some coma aberration are captured by the high magnification camera, and determining whether the actuator passes inspection by comparing the calculated coma aberration value with a

predetermined reference value, and

wherein the controller

controls the X-axis and Y-axis stages until the low magnification camera captures the beam,

controls the X-axis and Y-axis stages to centrally photograph the beam using the low magnification camera,

controls the Z-axis stage to photograph the beam using a low magnification of the low magnification camera,

controls the X-axis and Y-axis stages to centrally photograph the beam using the high magnification camera,

controls the Z-axis stage to photograph the beam using a maximum brightness of the high magnification camera, and

controls the R-axis and T-axis stages to photograph the beam using a minimum coma aberration of the high magnification camera.